CLINICAL REPORT

FOR THE

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In the Reports which I formerly offered to the public through the medium of this Journal, my object was not merely to convey information of practical utility, but also to show the actual amount of practice in the Surgical Hospital which had been recently established. Cases were therefore selected, fully as much on account of their severity, or other circumstances rendering them of importance, as in respect to the instruction to be derived from them; and the detail with which ordinary operations were related might not unfrequently have incurred the charge of prolixity from practical readers, who were not aware of the peculiar circumstances under which these reports were undertaken. Having now no view but to communicate the observations tending to illustrate the practice of surgery, which my connection with the Royal Infirmary may enable me to collect, I shall not for the future think it necessary to notice any cases except those which afford subject of interesting or useful consideration.

Excision of the Superior Maxillary Bone—Recovery.—

Janet Steel, aged 42, was admitted on the 26th of November. She stated, that, about ten years ago, she received a kick on the face from a cow, which was followed by swelling that never entirely disappeared. In the beginning of last year she began to suffer pain in the seat of enlargement, and at the same time remarked a great increase in the rapidity of growth. The superior molar and bicuspid teeth of the side affected soon afterwards loosened and came away. Within the last few months the progress of the disease had not been so rapid, but it had advanced so far as to be very distressing, and threatened to prove still more serious. The cheek was considerably distended by a tumour springing from the superior maxilla, which, though firm, did not possess the hardness of bone. When the finger was drawn along the lower margin of the orbit, an inequality in its surface was detected, and the floor of the cavity could be felt distinctly elevated. The palate, throughout the whole of its extent on the left side, and also for some distance beyond the mesial plane, was greatly thickened, and extremely irregular on its surface, which exhibited the characters of a malignant ulcer. The patient in all other respects enjoyed good health, and it was, therefore, thought proper to attempt eradication of her formidable and extensive disease, which evidently originated from, and was probably confined to, the superior maxillary bone.

On the 28th, the patient being seated on a chair, a perpendicular incision was made from the inner angle of the eye down through the lip, and another from the convexity of the malar bone to the angle of the mouth. The flap thus formed was dissected up, and the integuments on each side turned back so as to expose the whole surface of the maxillary bone. One blade of the cutting-pliers was then introduced into the nostril, and the other into the orbit, so as to divide the ascending nasal process. A notch was next made with a saw in the malar protuberance, which then readily yielded to the pliers. After this, only the palate and septum of the nose remained to be divided, which was done by first circumscribing the morbid surface in the roof of the mouth with a sharp-pointed straight bistoury, and then cutting through the bone with the pliers. The diseased mass was now easily turned out to the side, and detached from its connections, when it appeared that the tumour had been removed quite entire. It was of moderately firm consistence, and of a yellowish colour, springing from the maxillary bone, filling the antrum, and, by its pressure, had caused absorption as well as displacement of the floor of the orbit. The arteries that required ligature having been tied, the patient was conveyed to bed. An hour after the operation, the cut edges of the integuments were brought into accurate contact by stitches

of the interrupted suture, except at the two points where the lip was divided, each of which was secured by the twisted suture, a sewing needle being used for the purpose. Cloths moistened with cold water were diligently applied. The wounds healed by the first intention, and the patient was dismissed on the 20th of December with wonderfully little deformity. She continues perfectly well.

Though there are unfortunately many malignant tumours of the face which do not admit of being eradicated, it is satisfactory to find that even those of the most threatening character, which are limited in their osseous connections to the superior maxillary bone, may be removed with complete and permanent relief. In one of my former Reports (1830) there is related the case of a woman from Galashiels, who was afflicted with a soft, red, and most malignant-looking tumour of the upper jaw, which encroached upon the mouth, and distended the cheek. This tumour was removed by excision of the superior maxillary bone, and nearly five years having now elapsed since the time of the operation, the patient may be considered safe from any return of the disease. She has been provided by Mr Nasmyth, with an artificial palate and set of teeth, which render her appearance, mastication, and articulation, hardly at all defective.

To prevent this operation from being misapplied, and losing the confidence which may justly and advantageously be placed in it, the cases admitting of its effectual performance must be carefully distinguished from those in which, from the disease implicating the bones of the nose or the base of the skull, it cannot be of any use. As the external appearance in both these kinds of cases is not unfrequently very similar, the history of the disease should always be attentively considered along with its existing features. Headach, stuffing of the nose, protrusion of the eye, and expansion of the upper part of the face, must always be regarded as unfavourable signs, especially if observed primarily or early in the case. On the other hand, caution is required lest the operation be employed in cases where it is not really necessary, as when the tumour depends on a cyst containing fluid developed in the substance of the bone. The external appearance and consistence of such swellings closely simulate those of fibro-cartilaginous solid tumours, which, of all the morbid growths in this situation, are the most favourable for removal. But the diagnosis between them may in general be easily effected by pressing with the fingers over the surface of the enlargement, in one or more parts of which the bony shell is usually found so thin as to yield and crackle like a piece of parchment. Gensoul* relates a case in which the thick-

* Lettre Chirurgicale, 1833.

ness of its parietes concealed the existence of a cyst, and led him to undertake excision of the bone, in which he had proceeded so far as to dissect away the cheek from the tumour, when its true nature was discovered. But in all the cases that have come under my observation, there was a part of the shell sufficiently thin to be easily recognized: And the two following may be selected as examples.

A gentleman came from the country to have a tumour of the upper jaw removed. It depressed the palate, encroached upon the nostril, and elevated the cheek. At the most projecting part in each of these situations the tumour, though elsewhere of bony consistence, yielded to pressure, and recovered from it with a crackling sensation. Dr Thomson, Mr Turner, and I, who saw the patient together, agreed that his complaint depended merely upon a cyst, which would contract and be obliterated if freely opened. I accordingly evacuated a quantity of limpid fluid by making a puncture under the lip, after which the swelling contracted, at first rapidly, and afterwards more slowly, until it ceased to occasion any annoyance. Last summer a young lady from North Shields applied to me on account of a tumour of the lower jaw, which extended from the bicuspid teeth to the articulation. It was round and firm, and had been growing for three years, having been preceded by pain in the bone, which led to the extraction of the grinders at the part affected. In the most prominent point of the tumour, where it distended the cheek, and also in the situation of the gum, which was much expanded and flattened, I detected the characteristic yielding and resiliency of the thin osseous, or rather at these parts membranous, shell of a cyst, and did not hesitate to open the tumour by removing an elliptical slice from the alveolar region sufficiently large to prevent any chance of the aperture soon closing. Half a tumblerful of fluid, containing numerous shining scales of cholesterine, was evacuated. The patient suffered no inconvenience, and before long observed a remarkable diminution in the size of the swelling, which I understand has since gradually become smaller, and now does not equal that of a pigeon's egg.

In such cases it has been advised to employ setons, caustics, and other violent means to destroy the secreting action of the cyst, and induce a healing granulation of the surface; but there is reason to regard this practice as unnecessary and hurtful. That it is unnecessary will appear from the cases just related, to which others attended with a similar result might have been added; and that it is injurious seems probable from the following one. A young man had a large tumour of the lower jaw, which was ascertained to depend on a cyst in the bone. A seton was passed across it from the mouth through the cheek. Contraction followed; but a solid growth

afterwards occupied the place of the former cavity. My opinion being then asked, I advised excision of the affected portion of the jaw, which was executed by the gentleman who had operated in the first instance.

Preternatural Aperture in the Nose—Closure by transplanting a flap of Skin.—Ann Millar, aged 25, was admitted on the 3d of September on account of an opening in the side of the nose, which had resulted from exfoliation of the superior maxillary and nasal bones, and existed between four and five years. It was situated just below the commissure of the eyelids, and, being large enough to admit the point of a finger, allowed the septum and other parts in the interior of the nostril to be distinctly visible. The deformity and other inconveniences attending this defect rendered the patient very anxious that an attempt should be made to remedy it; and as the surrounding parts seemed quite healthy it was thought right to comply with her wish.

The dotted line, Fig. 1. Plate I., represents the shape and size of the aperture. A semilunar incision was made on each side of it to remove the round callous margin, and then by means of the other elliptical incision a flap was formed from the cheek. This piece of skin was readily turned round into the opening without being twisted, and all the cut edges were then stitched together by the interrupted suture. Caddis wet with cold water was applied for a few days, and the whole line of incision united by the first intention, leaving hardly any trace either of the aperture or the part from which the flap was transplanted.

This little operation has been described particularly, because the principle followed in its performance in regard to the formation of the flap may be found useful in practice. When a flap of skin is transplanted, it is usually shifted into its new position by twisting the neck which is left for nourishing it. This is apt to occasion a stagnation of the circulation, and requires a subsequent operation for removing the non-adherent fold. In the method just described, which was employed in another case about the same time, this twisting is avoided, and it is believed that it will be found to admit of pretty general application.

Medullary Degeneration of the Eyeball—Excision—Progress of the Disease.—Isabella Thomson, aged 3 years, was admitted on the 6th of January. The pupil of the left eye was much dilated, and of a bright amber yellow colour. The eye looked larger than natural, but whether this depended upon the coats being distended, or upon the ball being merely protruded by a growth behind it, could not be positively ascertained. The child complained of pain in her forehead, and had fallen

off in flesh considerably. Her appetite was impaired, and her bowels were moved with difficulty. The first appearance of the disease had been remarked fifteen months before, when a small speck of variable colour appeared in the back part of the eye, without pain or defect of vision, from both of which symptoms she began to suffer in November last.

As no doubt could be entertained that a medullary fungus existed in the eye, the case seemed equally desperate, whether allowed to proceed unchecked or subjected to operation—but as excision is still believed by many to afford a chance of escape, if executed early, before the disease shows itself externally, it was resolved to perform it. On the 10th, I divided the eyelids at their outer commissure, to obtain sufficient room, then cut through the reflexion of the conjunctiva, and lastly, detached the eyeball by a knife guided on the finger.* It now appeared that the morbid growth had proceeded backwards from the sclerotic coat, surrounding the optic nerve, and pressing the eyeball forwards. Some of this soft pulpy substance was taken away, but as it seemed plainly impracticable to remove the whole of it, the attempt was not prolonged. Some pieces of lint introduced into the orbit sufficed to arrest the bleeding, and the child required very little treatment afterwards. Hardly any constitutional disturbance followed, and a remarkable improvement in the general health was soon perceived. Advantage was taken of this temporary improvement to send her home, where, as was to be expected, the disease, I am informed, has again appeared.

In adding another instance of unsuccessful extirpation of the eye for medullary degeneration to the many which are already upon record, I cannot refrain from expressing my conviction that it would be better both for the interests of humanity and the credit of surgery if this operation were entirely abandoned. The melanotic disease of the eyeball has been repeatedly removed, if not with permanent success, at all events with relief of considerable duration; but the true medullary affection, such as is so often met with at an early period of life, does not, I believe, admit of any salutary interference. Cases like that which has just been related do not afford a sufficient argument against the operation, because the existing disease being in them not eradicable, no evidence can be obtained from their result to show that excision may not prove effectual under more favourable circumstances. In the following case, the parts affected were in the most promising state that it is possible to find them.

Robert Scott, aged 3 years, was admitted into Minto House on

* From repeated trials, I am satisfied that the most convenient instrument for the purpose is a pair of probe-pointed scissors curved on the side.

the 24th of May last. In the pupil of the left eye, seemingly at the back part of the ball, there was an irregular reddish-white appearance. The eye itself was not otherwise altered, nor did the child show any other signs of disease or suffering. An alteration in the colour of the pupil had been first noticed about twelve months before, and had since then gradually become more distinct. The eye was extirpated, and found to contain a medullary tumour springing from the central part of the retina, and occupying about a third part of the cavity. The optic nerve was perhaps a little smaller than usual, but not otherwise altered. The child made a good recovery, but, before the end of many weeks, was perceived to have the vision of the remaining eye impaired. Soon afterwards a white speck was observed through the pupil, which slowly and gradually assumed the distinctive features of the medullary disease. A fungus also at length protruded from the left orbit, and by its pressure causing absorption of the bones, made a way for itself into the mouth.

If it could be proved that excision had been successful in a single well authenticated case of medullary tumour of the eye, it would be wrong to refuse the chance of benefit from the operation. But if the result of numerous trials, under every variety of circumstances, has been uniformly unfavourable, it must be cruel to repeat the painful experiment any longer. The only instance of alleged success met with in this country is that recorded by the late Mr Wishart.* The operation was performed on a boy nine years of age, four months after he had received a blow on the eye. "The left eye was dull, and presented a general turbid appearance; the cornea was transparent, but numerous vessels passed into it over the sclerotica. The pupil was moderately dilated and fixed; its margin was slightly serrated. In the posterior chamber an opacity was observed resembling a yellow dusky membrane, lining the whole posterior part of the eyeball, and perceived more distinctly when the eye was viewed laterally." Mr Lawrence has remarked in regard to this case, † that "it is more analogous to those instances of brilliant deep-seated discoloration following serious accidents, than to the unequivocal examples of the medullary fungus." The justice of this suspicion was forcibly impressed upon me by a case which I lately saw with Dr Combe of Leith. The patient was a little boy whose eye had been wounded some weeks previously by a pin-pointed arrow. The appearances presented by it were precisely those described by Mr Wishart, but the brilliant yellow coating at the bottom of the ball,

* Edin. Med. and Chirurg. Journal, 1823.

† Treatise on Diseases of the Eye, p. 623.

which, had it not been for the history of the case, would certainly have been ascribed to the presence of a malignant growth, was doubtless caused by an effusion of lymph ; and not only the external appearances in Mr Wishart's case, but also that presented on making a section of the extirpated eyeball, admit of the same explanation. " The diseased mass into which the retina had been converted, connected only to the optic nerve, floated loosely in various folds, occupying both chambers of the eye."

Injury of the Head—Secondary Symptoms—Discharge of matter by operation—Death — Dissection. James Swinton, aged 34, hackney-coachman, was admitted on the 7th of January, soon after being found lying insensible by the policeman on duty at the Calton Hill. It was ascertained that he had gone up to look for a London steam-boat which was expected, and finding that it had arrived, hastened down to get his coach ready for the passengers, when, the rocks being slippery from frost, he had fallen about 16 feet, and lighted with his head on the stone steps at the foot. When brought to the hospital he was very restless and incoherent, as if intoxicated, which, however, he was not, though reported to be of irregular habits. There was a very large wound of the scalp, extending from the root of the nose to the vertex, the edges of which were very uneven and much lacerated. The bone was laid bare to the extent of several inches in length. Soon after admission he became composed and sensible. In the evening the pulse was 84, but the skin was hot, and he complained of great pain in the head. ℥xxvi. of blood were taken from the arm, and gr. v. of calomel, with xv. of *Pulv. Jalap.* given as a purgative.

Next day, though he was much better, it seemed proper to repeat the bleeding to the extent of ℥xvi.

On the third day his pulse was 104, and he complained much of headach. The tartrate of antimony was ordered in nauseating doses.

On the fourth day he was delirious and violent, so as to require the strait jacket. ℥xx. of blood were taken.

On the fifth day he had not slept, and was very restless.

On the sixth day he was very noisy and unruly ; passed his stools in bed, and seemed in a hopeless state.

On the seventh day he was more composed, so that the jacket was removed. He had slept a little towards the morning, pulse 96.

During the six following days he went on most favourably. He was sensible and cheerful. The sloughs separated from the scalp ; great part of the exposed bone granulated ; the pulse, tongue, and appetite were natural.

On the 14th day a great change had taken place. He complain-

ed of more pain in the head; the tongue was dry and brown ; skin hot ; pulse 100. He was bled to the extent of ℥x. with considerable relief; and resumed the solution of tartrate of antimony.

During the three succeeding days he had frequent severe rigors, and the wound assumed a dry glassy appearance. As there could be no doubt that suppuration had now taken place within the cranium, while the integrity of the patient's sensorial and voluntary powers seemed to show, that the brain and its immediately investing membranes were not seriously injured, it was thought right to perforate the bone. This was done on the 17th day by means of the *trepan*, which was set on the bare portion of the skull, about the anterior extremity of the sagittal suture. The bone was quite dead and perfectly dry throughout its whole thickness. So soon as it was divided, a quantity of thin, extremely fetid pus, by computation at least ℥ss. gushed out.

During the three following days he had frequent rigors, and was occasionally incoherent. The pulse was very variable, ranging from 84 to 130. But his appearance was on the whole not unfavourable ; he was quite sensible, and the wound looked well.

On the 21st day he became worse, passing his stools in bed ; swallowing and articulating with difficulty ; and suffering from convulsive twitching of the muscles, with hiccup. He died on the 22d day.

On dissection, the dead portion of the bone was found defined by an ulcerated groove on the outer as well as inner surface of the skull. The *dura mater* was covered with puriform lymph for some distance beyond the dead portion of bone, and at one part was so soft and thin, that it scarcely bore the pressure of the forceps. Under the *dura mater*, and nearly to the same extent as the superjacent effusion, there was a similar deposition in the subarachnoid cellular texture. The other contents of the cranium were found in their usual condition.

This case has been selected from many very severe and some fatal injuries of the head, because it was the only one that has occurred for a long while, in which the internal suppuration was so seated and limited, as to afford any promise of advantage from the operation of *trepan*. And, had it not been for the unfortunate morbid action under the *dura mater*, there can be little doubt that the patient would have recovered.

Carotid Aneurism—Ligature of the Artery—Recovery.—Thomas Blair, aged 43, farm-servant, was admitted on the 10th of February. He stated, that, seven weeks before this time, he had been struck down by a horse, behind which he was standing, and was found by his friends lying insensible. It appeared that the shoe had cut his face over the malar projection, and that the point of it, which was very large and thick, had inflict-

ed a blow on the throat a little below the angle of the jaw on the right side. He soon recovered his consciousness, and complained of great pain throughout the injured side of his head and neck, which was much swelled. In the course of ten days the swelling of his face subsided, but that of the neck rather increased, and became more painful; and, as his sufferings seemed constantly becoming more severe, he had been sent to be under my care in the hospital.

The hollow at the upper part of the neck was occupied by a tense swelling, which was felt to be distended in every part at each pulsation of the heart. The patient kept his head bent forward to the right side, and seemed very apprehensive of any alteration in this position. He complained of intense pain in the right side of the head. The right eye appeared nearly a half smaller than the other, and the whole of the face on the same side had an immoveable sort of appearance as if paralyzed. The tongue was protruded with difficulty, and, when withdrawn, evidently moved by the action of the left half alone, the other being quite passive, and merely following the contracted part, but both sides received the impression of taste. The voice was almost entirely lost, and replaced by a rough croaking whisper. From these circumstances, it was concluded that an aneurism of the common carotid artery had resulted from the blow, and caused pressure on the nerves at the root of the neck.

The common carotid was tied on the 18th. The operation was difficult, from the thickness of the patient's neck, the distension caused by the aneurism, and the unfavourable posture in which the head was obstinately maintained. The *omo-hyoideus* having been exposed, and pulled a little downwards, the sheath of the vessels was opened on its tracheal side by lifting up a fold with the forceps, and cutting it with the knife. The artery being thus rendered quite bare for a small extent, without any other disturbance to its position or connections, a strong silk thread was passed round it by the simple curved needle, and tied as tightly as possible. *The patient was instantly relieved from the pain, and had never any return of it.* Not the slightest unpleasant symptom followed the operation. The swelling ceased to pulsate, and gradually diminished; the countenance acquired a more natural expression; the different parts which had been paralyzed regained their mobility; and, lastly, the voice returned. The ligature came away on the 11th March. The patient's strength having been very much reduced, was slowly recovered; but he went home on the 14th April, and is now well.

This case seems interesting from the mode of its origin, the symptoms attending it, and also the circumstance of its being the first instance of carotid aneurism operated on in Edinburgh.

Anomalous Tumour of the Neck—Treatment by Seton and Caustic—Recovery.—Henry Angus, aged 40, mason, was admitted on the 1st of March on account of a large tumour on the right side of the neck. It was nearly twice the size of a turkey's egg, and lay under the sterno-mastoid, before and behind which it projected. The swelling was tense, and, when carefully examined by pressure, allowed fluctuation to be felt distinctly, but no pulsation. He stated, that, eight months before, when descending a stair, he had fallen forwards and struck the crown of his head. He remained insensible until the next day, and was confined to bed for three weeks. Two or three days after the accident, he noticed a small tumour about the size of a pea, deeply seated below the angle of the jaw. It gradually increased without causing any particular inconvenience, except from its size, for five months, when it was punctured, upon which a large quantity of fluid escaped, and the swelling subsided. Soon afterwards it returned, and proceeded with accelerating rapidity, attended latterly with pain.

I introduced a trocar at the anterior and lower part of the swelling, and drew off a quantity of thin watery-looking fluid, with scales floating in it. A seton was then conveyed through the opening already made, under the sterno-mastoid, and out behind it, so as to cross the tumour at its longest diameter. No remarkable consequence, either local or general, followed, and the seton, which had been changed daily, was withdrawn on the 12th. The upper and posterior orifice closed soon afterwards, and the lower one seeming insufficient for discharging the matter, which was copious and fetid, was repeatedly dilated with the knife, and lastly, by the caustic potass. The swelling under this treatment gradually contracted, and the patient was dismissed on the 16th of April, with hardly any trace of the complaint.

This case has been particularly related, not only because it presented a very formidable appearance, but because the tumour, though differing in its nature from those usually met with in the cervical region, afforded an example of the *hygroma* which is occasionally met with in this situation.

Abstraction of both Testicles—Recovery.—A. H., aged 28, farm-servant, was admitted on the 2d of January on account of a wound in the scrotum. He stated that, the day before, after drinking for several hours with some of his friends, he had set out to return home, but feeling sick, lay down on the road and fell asleep. He was awakened by pain of the scrotum, and on looking up, saw three men leaving him—at the same time finding his breeches down, and soaked with blood. He then

walked with great difficulty to his master's house, which was about a quarter of a mile distant.

The scrotum was much swollen and discoloured. About the middle of it there was an irregularly shaped wound, somewhat more than an inch wide, looking as if it had been inflicted by repeated application of a cutting instrument. When the finger was introduced into this opening, it entered a cavity in the situation of the testicles. But as the sides of this cavity were very thick and dense, it could not be readily determined whether they were constituted by the lacerated organs themselves, or merely the surrounding parts in a swollen state. The patient complained of intense pain in the seat of the injury, and the lower part of the abdomen. He had been bled from the arm previous to admission, and while weak and stupid from the combined effects of drink, pain, and loss of blood, was extremely agitated both in body and mind. The scrotum was kept cool with wet cloths, and supported by a bandage, and an antimonial solution was prescribed.

He continued very restless, and on the 4th complained of pain so much that it was thought necessary to take ℥xviii. of blood from his arm. He had a very anxious look, and hurried breathing, with a profuse thin bloody discharge from the wound. On the 8th, a counter opening was made at the lower part of the scrotum, which gave vent to a quantity of fetid matter, and afforded great relief to the patient. The swelling then gradually diminished, when it became evident that both the testicles were gone, and that the firm swelling which had occupied their place depended on thickening of the *tunica vaginalis.* He suffered little after this, except from weakness and pain in the region of the spermatic cords, and was dismissed cured on the 10th of February.

The judicial authorities investigated the case, in order to discover the perpetrator of this cruel injury, but did not succeed in penetrating the mystery which involved it. Being asked if the patient's story was credible, I stated my opinion, that, however improbable it might seem, there was no impossibility in the affair happening as he related, since, after a sufficient wound had been inflicted on the scrotum, the testicles might be very quickly protruded, and either cut or torn away, as in the ordinary process of gelding young animals. The patient declared that the men he saw were entire strangers to him, and offered to substantiate the whole of his statement by oath; but as his character for truth and other moral qualities was far from being good, it seems, on the whole, most likely that he sustained the injury under circumstances which rendered him unwilling to divulge the real history of the transaction.

Cancer of the Perineum—Excision—Recovery.—Hugh M'Intyre, aged 56, was admitted on the 12th of July on account of a sore in the perineum, which had existed for two years, and been preceded by an induration in the part, also of two years standing. The sore was about three inches in length, and presented the appearance of a deep cleft, extending from the scrotum to the verge of the anus. Its edges were thick and everted; its surface hard and unequal; and its base thick, dense, and quite distinct from the neighbouring parts. The general health was good.

As various means of treatment had been tried without success, both in the Highlands, whence he came, and in the Hospital since his admission, excision was determined upon, and performed on the 23d. The patient having been placed on a table in the position for lithotomy, the whole of the morbid part was carefully dissected from the muscles of the penis and *sphincter ani.* Three vessels were tied at the time, and as many soon after the operation, in consequence of secondary bleeding. The wound healed slowly, but regularly, and he was dismissed cured on the 17th of September.

Chimney Sweepers' Cancer—Excision of the Scrotum—Recovery.—John Robertson, aged 30, was admitted on the 30th of January, on account of a diseased state of the scrotum, which was immediately recognized as the affection described by Mr Pott under the title of Chimney Sweepers' Cancer. Though this disease would seem to be not uncommon in London and other large towns, it is never met with in Edinburgh, except in persons who have begun to suffer from it elsewhere; and it is accordingly so rare here, that during the whole period of my connection with the Infirmary as student and surgeon, I have not seen an instance of it either there or in private. This immunity of the trade in Edinburgh from a complaint which constitutes a serious scourge to it in other places, seems at first sight easily accounted for by the mode of sweeping chimneys here, which is effected not by climbing boys, except in the case of some very few particularly constructed vents, but by letting down from the top a broom, to which a weight is attached, and which, being then alternately drawn up and allowed to descend, completely attains the object in view. But boys seldom climb after the age of puberty, as they then become too large for the purpose; while, according to Mr Pott and other practical writers, the disease is hardly ever observed at an earlier period of life, and usually occurs at a much later one. The theory of the men themselves is, that the body, from being saturated or poisoned, as they express it, by the large quantities of soot they are forced to swallow in their youth, ac-

quires a predisposition to the disease, which, however, seldom actually appears until about the middle period of life. It is worthy of notice, that the individual whose case is now to be related, from being of small stature, and extremely thin wiry make, has never abandoned the practice of climbing, boasting that an aperture 12 inches by 9 is quite sufficient for his passage. He became an apprentice at five years of age in London, and remained there sixteen years, afterwards having no settled residence, but travelling about from place to place. Two years ago a small wart appeared on the scrotum, and in the course of a few months was cut out by a surgeon in Manchester. Other warts began to grow soon after, and at the time of his application here, there was hardly any part of the scrotum quite free from them, though the cicatrix of the former operation remained sound. The largest wart was about the size of a nutmeg, and on the side of the scrotum opposite to it, there was an excavated ulcer, with hard edges, and a purplish coloured surface. He complained of severe shooting pains in the seat of the disease, and extending up along the groins, but had no swelled glands, or any other sign of disease farther than what has been mentioned.

Thinking it useless to remove the warts separately, I resolved to take away the whole of the scrotum, so that as little as possible of the skin predisposed to disease might be left. The operation was performed on the 27th. To lessen the raw surface, and prevent the edges of the integuments from being drawn by the subsequent contraction of the granulating process above the testicles, so as to leave them exposed, I passed some stitches through the cut edges, and tied the threads on a pledget of lint placed over the testicles enclosed in their vaginal coats. This had the desired effect; and, however unlikely it might have appeared at first to any one not acquainted with the extraordinary facility with which wounds of the scrotum, attended with loss of substance, are healed, owing to the laxity of the surrounding parts, the cicatrix when completed was not so large as a sixpence. He was dismissed quite well.

Cancer of the Leg—Amputation—Recovery.—Jane Syme, aged 64, from Arbroath, was admitted on the 12th of November, on account of a large ulcer of the leg, situated on the inner side of the limb, a little below the knee. It was nearly circular in shape, and measured about five inches in diameter. The surface, which extended over the bone, and allowed the probe to pass into its substance, was depressed below the surrounding level; but the edges were elevated and everted. She stated, that, five years ago, while filling a cart with whins, she had her leg slightly hurt by one of the prickles. A scab formed over

the wound, and was rubbed off by her worsted stocking, when a sore appeared, which resisted all the applications she could think of. The skill of various practitioners was then tried without success, and the sore became progressively larger and more distressing, being the seat of incessant and intolerable pain.

As the history of the case, together with the appearance and painful sensations of the ulcer, left no room for doubt as to its cancerous nature, amputation was performed above the knee on the 21st, two flaps being formed by transfixing the limb from side to side. No unpromising symptom directly followed the operation, but the case was rendered tedious by the formation of a large abscess in the stump when the wound seemed nearly healed, and the discharge continued so profuse for several weeks, that the greatest apprehensions were entertained for her recovery. Through means of free counter-openings and careful bandaging, the discharge at length diminished; and, though the patient regained her strength slowly even after the wound was healed, she felt able to return home on the 25th of February.

Excision of the Elbow Joint—Recovery.—James Reid, aged 8, from Leith, was admitted on the 15th of October. The right elbow and upper half of the fore-arm were much swelled, the joint allowed of very little motion, and on each side of it there was a sinus leading to the bone. The complaint was referred to a strain received twelve months before, which had been followed immediately by pain, and in the course of three or four months by swelling. The operation was performed in the usual manner, and the patient was dismissed on the 21st of November.

This case has been noticed, in order that I might have an opportunity of stating, that the period which has elapsed since the performance of the earlier operations for excision of joints which I put upon record enables me now to affirm positively that complete and permanent relief may thus be obtained. At the Meeting of the British Association for the Promotion of Science which took place in Edinburgh last September, several patients, who had undergone the operation from three to seven years before, were submitted, along with the diseased parts which had been removed, to the examination of the Medical Section, and the perfect satisfaction then expressed in regard to the result may perhaps tend more to establish the utility of the practice than any thing which I could say in its favour.

Burn of Arm—Mortification of the Hand—Amputation at the Shoulder Joint—Recovery.—Margaret Fyffe, aged 4, was admitted on the 26th of November on account of a severe burn, which she had suffered some days before from her clothes taking fire. From the wrist of the left arm up to the shoulder and across the back, the integuments were completely burnt through

their whole thickness, being of a dark-brown colour, and hard leathery consistence. A little below the axilla there was a transverse crack or crevice in the skin, through which the cellular and muscular substance appeared to be disorganized, and there was a similar breach in the fore-arm near the elbow. The hand, which had been quite cold ever since the accident, the day after admission displayed a number of dark-coloured vesications; and where this took place the appearance presented was quite the same as that seen in a subject which has been many weeks in the dissecting-room. It seemed difficult to explain the death of the hand; but dead it certainly was, and amputation afforded the only remedy,—though where the operation should be performed was a question that required consideration. When the state of the integuments and subjacent parts of the arm, so far as it could be ascertained, were taken into account, it appeared unlikely, if the hand merely was removed, that the raw surface left after separation of the sloughs would cicatrize, if the child should be able to struggle through the trial; while, even supposing this possible, the stump could not be expected to prove either useful or seemly. It was therefore resolved to amputate at the shoulder joint, by which means all the most deeply burnt parts would be removed, and no more of the surface left to heal than could be avoided, or than it was likely the strength of the patient might accomplish. She was extremely weak, with a pulse ranging from 140 to 160, but still took her food, and showed no sign of speedy sinking. The operation was performed on the 1st of December by transfixing the joint with a narrow sharp-pointed knife introduced at the lower part of the posterior margin of the axilla, and brought out between the acromion and coracoid processes, carried obliquely, so as to form a flap; and by then cutting round the head of the bone, and outwards on the inner side, so as to form a second flap. The axillary artery was tied, and, to prevent bleeding as much as possible, the cavity between the flaps was filled with pieces of lint, after which a bandage was applied to effect moderate pressure.

The patient bore the operation remarkably well. She seemed to suffer very little from it, and to be greatly relieved by the removal of the injured arm. The lint was taken out on the 3d, and the flap soon adhered. The large ulcer remaining after the slough separated was very slow in healing, and the profuse discharge from it, together with the hooping cough, which she unfortunately took while in the hospital, rendered her very weak. She ultimately recovered, and was dismissed on the 14th April.

On examining the limb, it appeared that the humeral artery, opposite the breach in the skin occasioned by the burn, was obi-

terated, the coats being nearly gelatinous, and the cavity occupied by a soft pulpy-looking fibrinous substance. The mode of operation that was followed is certainly the easiest and quickest process of disarticulating at the shoulder, and should be preferred when the state of parts allow of its performance.

Laceration of the Hand—Amputation of the Fingers at their carpal joint—preservation of the Thumb.—James Morton, aged 11, was admitted on the 26th December on account of an injury which he had sustained in Leith the same evening from a machine for grinding colours. The middle, ring, and little finger of the right hand were removed, the joints of the forefinger were laid open, and the bones of it broken, while the integuments and muscles were torn away on both sides of the hand, half way up the metacarpus. As the thumb remained sound, with the exception of having had the nail squeezed off, its preservation seemed very desirable, and though not acquainted with any similar case from which the utility of a thumb so insulated might be inferred, I resolved upon trying the experiment. A semilunar incision was made on each side of the hand, close to the margin of the laceration, and meeting at their extremities. The flaps thus formed were dissected off the metacarpal bones until their articulation with the carpus came into view—the joints were readily divided with a narrow sharp-pointed knife, and after the vessels that bled had been tied, a few stitches were introduced to keep the soft parts in their proper position. The patient suffered little local and no constitutional disturbance, but the thumb appeared so long and uncouth, that doubts were entertained as to the propriety of saving it. The wound healed slowly, owing to the muscles having been bruised more extensively than the integuments, but was completely cicatrized on the 20th February, and though the patient cannot yet speak from experience in any particular instance, there can be little doubt that the thumb will prove very useful to him. He can use it with wonderful freedom, and may easily be provided with an artificial hand, which will increase the use he is able to make of it. Fig. 2 represents the thumb after the cure was completed.

Purpura Hemorrhagica—Amputation of the Great Toe through the Metatarsal Bone—Hemorrhagic tendency—Recovery.—John M'Lachlan, aged 12, was admitted on the 26th December for the removal of a toe which had been diseased for twelve months, and promised no improvement. He was a thin pale boy, but not otherwise unhealthy looking, and had not previously suffered from any illness except the one complained of. On the 28th he suddenly presented all the characters of the most strongly marked *purpura hemorrhagica.* Blood issued from the sore

on his foot, and all the mucous surfaces, coagulating in his nostrils and round his teeth, and passing copiously from the urinary organs and rectum. The discharge from the former of the two last mentioned cavities was much more like blood than urine, and unusually copious. Long livid marks, as if caused by the stroke of a blunt weapon, appeared on the limbs; bright purple spots appeared all over the body, and the tongue exhibited a number of ecchymosed blotches. The pulse was extremely frequent, and the stomach rejected food.

Acids, wine, and tonics of different kinds were tried, but as all these means seemed only to increase the sickness and general uneasiness, they were laid aside, nothing being given to the patient except the mildest farinaceous nourishment. Under this treatment he gradually improved, the skin resumed its natural appearance, the gums and nose no longer displayed their bloody incrustation, and the evacuations became free from the sanguineous tinge. The patient regained his appetite, and gradually also his strength, so that he seemed able to suffer the operation. It was performed on the 9th January, by making two semilunar incisions, one on each side of the joint of the great toe, and meeting at their extremities, so as to inclose the morbid integuments, and leave merely sufficient soft parts to come together after the removal of the toe, which was effected by dividing the metatarsal bone with cutting pliers. Three arteries were tied, but as there was still a considerable bleeding which seemed to proceed from the cut surface generally, I filled the cavity with lint, and applied a bandage tightly round the foot. On visiting the patient in his bed about a quarter of an hour afterwards, we found his foot lying in a pool of blood, and lost no time in taking off the dressings and replacing them more effectually; graduated compresses were introduced carefully into the cavity, the foot was bandaged with the utmost tightness consistent with safety; and the limb was then laid on a cradle that raised it above the level of the body. No untoward occurrence happened afterwards, and the patient was dismissed cured on the 2d of February.

Though the astringent and stimulating measures used in this case did not prove useful, it does not follow that depletion would have been advantageous. In such a very weak state of the system, I think it could not be used with safety, though its efficacy under other circumstances is fully established. A robust country blacksmith applied to me last December, on account of purple spots which had appeared on the body generally, but particularly the limbs, in which he frequently felt severe shooting pains. He complained of sore throat and difficulty of breathing, and referred his illness to exposure to cold. He was advised to lose some blood, and performed the operation himself with so immediate relief,

that he allowed four pounds to flow, which, though much more than the quantity prescribed, and more probably than was required, had the desired effect. Between such extreme cases as the two which have been mentioned, a great variety occur, and require a modification of treatment corresponding to the characters they present.

Simple Fracture of Os Femoris—Reunion—Death at the end of Two Months—Dissection.—Susan Barr, aged 51, was admitted on the 2d of April in consequence of having sustained a fracture of the left thigh bone, which she stated had happened the preceding evening from being thrown down by a man who ran against her while crossing the street. The injury having been ascertained to be seated in the upper third of the bone, the limb, properly supported by splints, was placed upon a double inclined plane.

On the 15th she was suddenly seized with sickness and vomiting, and then became extremely hot and restless, with dry brown tongue and quick pulse. In three or four days these unpleasant symptoms left her, and on the 20th of May the limb was found sufficiently firm to be freed from restraint. On the 27th she had a rigor and a return of her former symptoms, which continued with progressive aggravation until the 7th of June, when she died.

The fracture had evidently been comminuted, see Fig. III. The broken surfaces remained *quite unconnected*, a soft bloody semifluid substance only lying between them. In the medullary canal there had been a deposition of osseous matter in a sort of granular state, and the external edges of the fracture were united by bridges of dense bone. In this case, then, the *provisional* callus of the French pathologists was nearly completed.

It is a remarkable fact in the history of pathology, that Duhamel's theory of the reunion of fractures, which was founded on an erroneous analogy between the formation of wood and that of bone, has proved to be much nearer the truth than that of Haller and his pupils, who entertained correct opinions as to the formation and nourishment of bone. Duhamel supposed, that, in a case of fracture, the periosteum had its inner layer converted into bone, just as the inner layer of the bark of a graft is converted into wood, and that thus a connecting bridge was formed between the broken bones. When specimens were shown to him of the union extending through the medullary canal, he explained the appearance by alleging, that the *internal* periosteum had suffered a similar change; and when his attention was called to sections of old united fractures, in which a compact mass of bone occupied the seat of the fracture, he was satisfied with supposing, that the external and internal perios-

teum had united. Rude and crude, and ill-founded as this theory was, it approaches wonderfully near the enlightened views of Breschet and Dupuytren, who have been the first to explain satisfactorily the process by which the every-day accident of fracture is repaired. The reader is no doubt aware that the explanation formerly admitted, of an organizable substance effused from the broken bones into the space between them, and gradually hardened into bone, is quite untenable; and that the process of reunion truly consists, 1. in the formation of a capsule surrounding the fractured extremities by thickening and condensation of the neighbouring tissues; 2. the deposition of bone in this capsule, and in the medullary canal; 3. the growth of bone from the surrounding osseous surfaces until the cavity is completely obliterated. The second stage is generally so far completed in from three to six weeks, that the limb regains its rigidity sufficiently to resist any moderate force, and the cure is then said to be completed; but the real cure requires at least as many months. The case that has just been related affords a striking illustration and confirmation of this process; since, if it were not for the provisional callus or bridges of new bone connecting the external edges of the fracture, the bone would still be flexible, and, in fact, one of the halves is flexible from the section having been accidentally made so as to leave the bridge more on one side than the other.

Fracture of the Patella—Reunion, with no perceptible interval between the broken surfaces.—William Vere, aged 62, on the 14th of October, slipt his foot while descending a stair, and fell forward, striking his right knee. The consequence was a transverse fracture of the patella, for which he was admitted on the 22d. The fracture was very distinct, but the joint, contrary to what usually happens, contained no serous effusion. The limb was laid straight, with the foot slightly elevated, and the ordinary bandage was applied to the knee. The patient proving unruly, recourse was had to a more efficient apparatus, contrived and successfully employed by my assistant, Mr Peddie. This consisted of two pieces of leather, about four inches broad, made to buckle round the limb above and below the fracture, and provided with another set of buckles, by means of which they could be drawn together so far as might seem necessary. The broken surfaces were thus kept in such close contact, that they united without any perceptible interval, and the patient was so satisfied with his apparently perfect recovery, that he insisted upon leaving the Hospital on the 7th of November, though warned of the probable bad consequence of exerting the limb.

Fracture of the Patella—copious effusion into the joint—Reunion with very slight separation of the fragments.—

James Legget, aged 54, was admitted on the 30th of November on account of fracture of the patella, which happened the night before from falling on the edge of the pavement while attempting to raise another man, who had fallen into the gutter through intoxication, he being slightly in the same state himself. The joint was greatly distended with fluid, and remained so, notwithstanding the use of cooling and discutient lotions for several weeks. Nevertheless, by the use of the apparatus just described, the broken surfaces were gradually approximated, and finally united with a very small interval between them, which could be recognized only from the injured patella being a little larger than the other.

Fracture of the Clavicle—Acromial extremity elevated above the sternal one.—There are few fractures, if any, in which the relative position of the broken extremities is so uniformly the same as in that of the clavicle. The depressing effect of the weight of the arm on the acromial end, and the elevating influence of the sterno-mastoid on the sternal portion are so constant and powerful, that of all the fractured clavicles which have come under my observation, I never saw an exception to the general rule but in the following case:

Margaret Crawford, aged 45, was admitted on the 17th February on account of an injury which she had suffered the same evening from the wheel of a carriage passing obliquely over her chest. The clavicle was found to be fractured about its middle; some of the superior ribs of the same side were broken, and the integuments of the thorax and neck were emphysematous. With bleeding, tight bandaging of the chest, and the free internal administration of the tartrate of antimony, she made a good recovery; but the remarkable feature of the case was the position of the broken surfaces of the clavicle. They were completely reversed from the usual one, and required no inconsiderable force to urge them into the same level; and even when the cure was completed, the sternal extremity lay rather below its fellow.

Compound Fracture of the Tibia and Fibula—Exfoliation removed at the end of four months—Recovery.—The patient, a man about 30, stated that, four months before admission, he had suffered a fracture of the leg from falling out of a cart, and that he afterwards tried to walk a few steps, when the broken ends of the bone protruded through his clothes, and was thrust into the dirty road on which the accident happened. Several small exfoliations had come away at different periods after the injury, and the limb at length became firm and straight. But still two sinuses remained in the neighbourhood of the fracture, and the leg gained strength slowly.

On probing the sinuses, it was found that they both led to a loose piece of bone which lay under a mass of new osseous substance that connected the broken extremities. Gentler means having failed, the bridge over the exfoliation was divided, so as to permit its extraction, and then the patient got well.

This case affords a good instance of the effect which loose exfoliations have in delaying the union of compound fractures, and illustrates the propriety of searching for them when the case proves tedious.

Compound Fracture of Tibia and Fibula—Extensive sloughing of integuments—Recovery.—John Murray, aged 52, carter, was admitted on the 12th of November on account of fracture of the right leg, which had been occasioned on the 8th by the wheel of a heavy loaded cart passing over it. The bones were broken obliquely, the tibia four inches, and the fibula one inch from the ankle. There was a small wound on each side of the limb, both of which extended to the bone. The leg, supported by splints, was laid upon an inclined plane. Some blood was taken from the arm, and a solution of tartrate of antimony, with supertartrate of potass prescribed for drink.

Nothing particular occurred during the first few days, the pulse keeping about 100, the tongue remaining clean and moist, and the patient looking well,—though the appearance of the leg was not quite so favourable, as it had become slightly swelled and œdematous. On the 17th, there being considerable lividity of the integuments and vesication, I made several incisions into the cellular substance, which seemed to be sloughing. It then became a question whether the limb should be removed, to give the patient a chance of escaping from the spreading gangrene which appeared to have commenced. As the system was little affected, I thought that the mortification might depend upon the weakness of the part of the limb which had suffered from contusion, and in this case would be limited to it; soothing means, therefore, were employed, and the leg soon presented a more promising appearance. The sloughs did not extend farther than had been expected, and, though the surface that remained after their separation was very slow in healing, the patient retained his good health, and was dismissed on the 8th of March with a straight and strong limb.

The connection between the local and constitutional symptoms of mortification has not yet been satisfactorily explained; but in the present state of our knowledge it is an important fact, that the latter are always proportioned to the intensity of the inflammatory action that precedes the death of the part affected, and may therefore be regarded as a measure of it. Thus, in

the case that has just been related, the formidable local appearances, being attended with little constitutional disturbance, were attributed not to the violence of action in the part but to weakness of its power.

Compound Fracture of Tibia and Fibula—Exfoliation of Tibia through its whole thickness—Recovery without shortening of the limb.—John Drummond, aged 18, on the 18th of October, in cleaning a window in Moray Place on the drawing-room floor fell into the area, lighting on his feet, and was immediately sent to the hospital. It appeared that the shock had been sustained chiefly by the left leg, both the bones of which were broken a little below the middle, and had penetrated through the integuments so as to make an opening on each side of the limb. His ankle-joint also was much swelled and mishapen from a partial dislocation of the astragalus backwards. Having remedied the displacement of the articulating surfaces by extension and coaptation, I adjusted the limb on an inclined plane, and endeavoured by the utmost care, as well local as general, to moderate the excited action that was to be expected.

On the 20th the patient became delirious during the night, and continued more or less so, with a very quick pulse, foul tongue, and other unfavourable symptoms, for several days. The cellular substance and periosteum sloughed extensively, and large masses of the dead substance were daily taken away. On the 27th it was ascertained that the *tibia* lay completely denuded in its whole circumference, to the extent of at least four inches, in short, from the fracture down to the epiphysis. It was then explained to the patient and his friends, that attempting to preserve the limb would be attended with great risk of his life, as the strength, which was already much reduced, could hardly be expected to resist the long continued and profuse discharge that must attend the separation of the dead bone; and that, even in the event of recovery, it was very unlikely the limb would be serviceable, owing to the sudden death of so long a portion of the bone. At the same time, an offer was made to do what was possible to obtain a cure without amputation, if the parties most interested were not deterred by the dangers which had been explained to them. It was resolved the trial should be made, and I accordingly carried on the treatment. In a short time the discharge began to diminish, and before long became so inconsiderable as to relieve us from any apprehension in regard to the patient's life, especially as his pulse and tongue were again natural, and the appetite had returned. The bone, too, though still denuded throughout its whole circumference, was no longer bare to nearly the same extent as at first. On the 1st of February the exfoliation represented by Fig. IV. was extracted, and the patient

left the hospital on the 24th, the leg being quite straight and of the original length, and having the place of the detached portion of bone occupied by new osseous substance.

This case seems to possess some interest, from affording an instance of the reproductive powers of the osseous tissue under circumstances that do not frequently occur. The exfoliation died as a direct consequence of the injury, and therefore cannot be supposed to have had any share in the formation of its substitute. But if the same extent of bone had been removed at once by mechanical means, it cannot be doubted, from the evidence of established facts, that a permanent deficiency would have remained at the part. And it may be added, that the extensive sloughing of the periosteum placed the origin of the new osseous substance from this source quite out of the question. It is evident that the presence of the dead bone somehow promotes the formation of its substitute; and this fact, however inexplicable, is of much practical importance.

Ununited Fracture of the Humerus—Excision of the ends of the bone—Phlegmatia dolens of left thigh and leg—Recovery.—R. M., aged 50, farmer, was admitted into Minto House* on the 7th of February. He stated, that two months before, his right arm had been broken by the wheel of a cart passing over it, that splints and bandages were applied, and that he was confined to bed for a fortnight. The splints were kept on for four weeks longer, during which he was allowed to walk about with his arm in a sling. It was then found that union had not taken place, and that the arm was perfectly useless, in which state it still remained. On examination, I found that the bone had been broken very obliquely; the lower end of it lay directly under the skin on the outer side of the biceps, and the upper one was felt quite on the opposite side of the limb, imbedded among the muscles. The limb could be bent in all directions at the fractured part, and the broken extremities were so perfectly moveable that it was evident no bond of union existed between them. To ascertain if any disposition to repair the injury still existed, I surrounded the limb very tightly with straps of adhesive plaster, then bandaged it firmly with a roller, and, lastly, applied pasteboard splints. At the end of a fortnight, the state of the arm was found precisely the same as it had been previous to this

* This house, since it ceased to be occupied as the Surgical Hospital, has been employed as a sort of "Maison de Santé," for the reception of surgical cases in that rank of life which renders treatment in a public institution disagreeable, and the remuneration of private professional attendance oppressive. The terms, including every charge, are 10s. per week. This sum defrays the expense of food and attendance, so that I have to account merely for the rent and medicines. The establishment is gradually becoming known, and the increasing resort of patients to it leads me to think that the plan might be more generally adopted with advantage.

trial, and it became necessary to decide on some more efficient means of relief.

I have seen the want of union, both in fracture of the humerus and in that of the fore-arm, attended with hardly any inconvenience, the bone having been broken transversely, and the muscles being equally balanced, so that though the limb was quite flexible at the injured part, in a state of repose, it could execute every exertion it was called upon to perform. In this case, however, owing to the obliquity of the fracture, the limb was entirely powerless, and the patient declared that, rather than be troubled with such a useless load, he would submit to amputation. Before resorting to this last remedy, it seemed proper to try some means for uniting the ends of the bone. The seton was the mildest that could be employed for this purpose, but the case did not appear suited to it, since it is only when the process of reunion has made some progress that the irritation thus occasioned can be of any service. From the extreme mobility of the broken surfaces, it was apparent that nothing lay between them likely to be converted into bone, and therefore the only method of affording relief was limited to the operation of cutting off the ends of the bone and placing them in contact.

On the 24th, an incision about two inches in length was made near the lower end of the bone, which was readily exposed, so as to have the rounded extremity removed by a saw. The other end was then sought for by cutting towards the part where it was felt, from the former wound. The depth of its situation prevented the application of the saw, but the cutting pliers proved sufficient to divide it. A splinter, about two inches in length, was thus detached from the shaft, and as its removal threatened to be attended with difficulty, it was allowed to remain, in the hope that union might be promoted by its presence. (See Fig. V.) Pasteboard splints were applied, with proper bandages, and the patient was confined to bed. Great part of the wound healed by the first intention, a portion of it at the centre only remaining open and discharging a small quantity of matter. The patient suffered hardly any pain, and no constitutional disturbance. The dressing was changed every second day.

On the 8th of March the patient felt rather hot and uneasy, and at ten o'clock at night suddenly complained of intense pain in the left groin and calf of the leg. Very soon afterwards the thigh was observed to be swelled and painful to the touch. Next day the limb was much enlarged from the groin to the ankle. It was tense, elastic, and very sensible of pressure, especially in the course of the *femoral* vein, where an induration was distinctly perceptible. The bowels were moved with dif-

ficulty after repeated purgatives and injections. In the evening and during the night, he had very frequent black vomiting. Pulse 150. On the 10th, the vomiting was succeeded by a nearly incessant and violent hiccup. A blister was applied to the epigastrium. On the 11th the hiccup still continued, and the state of the limb remained the same. Twenty leeches were applied to the groin. On the 12th, the pain and tension were diminished, and by the 15th were nearly gone. In addition to the treatment which has been stated, it may be mentioned that mild laxatives were occasionally administered, and evacuations procured regularly by injections. The patient during the attack presented a very sunk appearance, and subsequently became much emaciated. For several weeks he could not assume the erect posture without feeling great pain throughout the affected limb. On the 3d of April he put on his clothes for the first time; and on the 12th it was found that the arm had acquired considerable firmness. On the 28th he went home, a distance of twenty miles, the arm being quite rigid, perfectly straight, and not perceptibly shortened. There was still a very slight discharge of matter, but this I understand has since nearly ceased.

There being only three recorded instances of this operation proving successful in ununited fractures of the humerus since the case of Mr White in 1760, I feel happy in adding another. The cases requiring it must be extremely rare, but when they do occur, it will be satisfactory to know that the cure may be thus accomplished even under circumstances rather unfavourable.

But this case is perhaps still more interesting from the striking example it affords of an attack similar in all respects to the *phlegmatia dolens* * of puerperal females occurring in a male. Other cases of the same kind are recorded, but none that I know of so well marked. There can be no doubt, after the researches of Dr Davis and other modern pathologists, that this very curious affection depends on inflammation of the great venous trunks; and it is not difficult to conceive why this should be apt to happen after the process of parturition. But what led to it in the present case cannot be so readily explained.

Poisonous effects of Mercury externally applied.—Recovery.—James Maxwell, aged 35, had been in the Hospital for some time on account of an extreme tight stricture of the urethra, from which,

* An odd error has crept into pathological nomenclature through the use by Dr Davis and others of the title *phlegmasia dolens*, instead of *phlegmatia dolens.* Phlegmatia is a genus of the order Intumescentiae, of the class Cachexiae, of the system of Sauvages, while Phlegmasia is the second order of Dr Cullen's class Pyrexiae.

being at length completely relieved, he proposed to go home on the 30th of March. On the evening of the 29th, he desired one of his neighbours to rub his right hip and thigh with camphorated oil, a bottle of which happened to be in the ward. Instead of this a saturated solution of the nitrate of mercury, which stood in the same place from some fancy of his own, was applied. Intense pain immediately followed, and about one o'clock a severe rigor of half an hour's duration. About this time he passed easily a large quantity of water, presenting a natural appearance. During the five following days he passed no water, and the catheter was introduced repeatedly without allowing any to escape, except two or three teaspoonfuls of mucous-looking fluid destitute of urinous smell. On the night of the 5th of April he passed a few drops of urine, and the night following a large quantity; after which the secretion became natural in quantity and other respects. On the 3d of April he was bled to the extent of ℥xii., and my clerk, Mr Child, detected urea in the serum. The slough formed was superficial, but extensive, and left a sore extremely painful, which healed very slowly. Ptyalism appeared on the third day, and was very profuse, the alveolar ridge of the lower jaw became exposed, and will exfoliate. The patient drank freely during the suppression of urine, he was quite sensible, and lay quiet without any disposition to coma. The pulse was full and soft, ranging from 80 to 90. He regained strength very slowly, but was able to leave the Hospital on the 26th of April to go to the country, where I understand he has been gaining ground since rapidly.

This case is interesting on several accounts. In the *first* place, it affords an example of the suppression of urine, which results from poisonous doses of the oxymuriate of mercury given internally, occurring from the external application of a mercurial salt. *Secondly*, the suppression of urine was not accompanied with coma. And *thirdly*, the patient recovered after suffering complete suppression of urine for five days.

Oxalic acid taking with an intent to poison—Recovery.—A. M., hackney coachman, was admitted on the 3d of April, soon after swallowing ℥ii. of oxalic acid dissolved in a tumbler of water. Free vomiting was induced by sulphate of zinc, and he afterwards took a large quantity of chalk with milk. In the evening he complained of severe burning pain in the abdomen. Thirty leeches were applied, and followed by fomentations. Next day he was easier, and on the 8th he was dismissed quite well.

As the quantity of oxalic acid necessary to prove fatal has not yet been determined, I have thought it right to record this case, which was well authenticated.

Fig. 4.

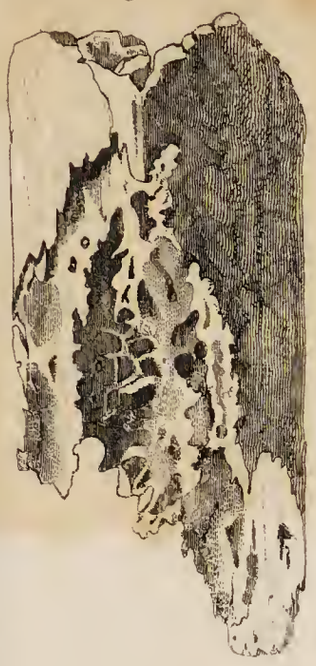

Fig. 3.

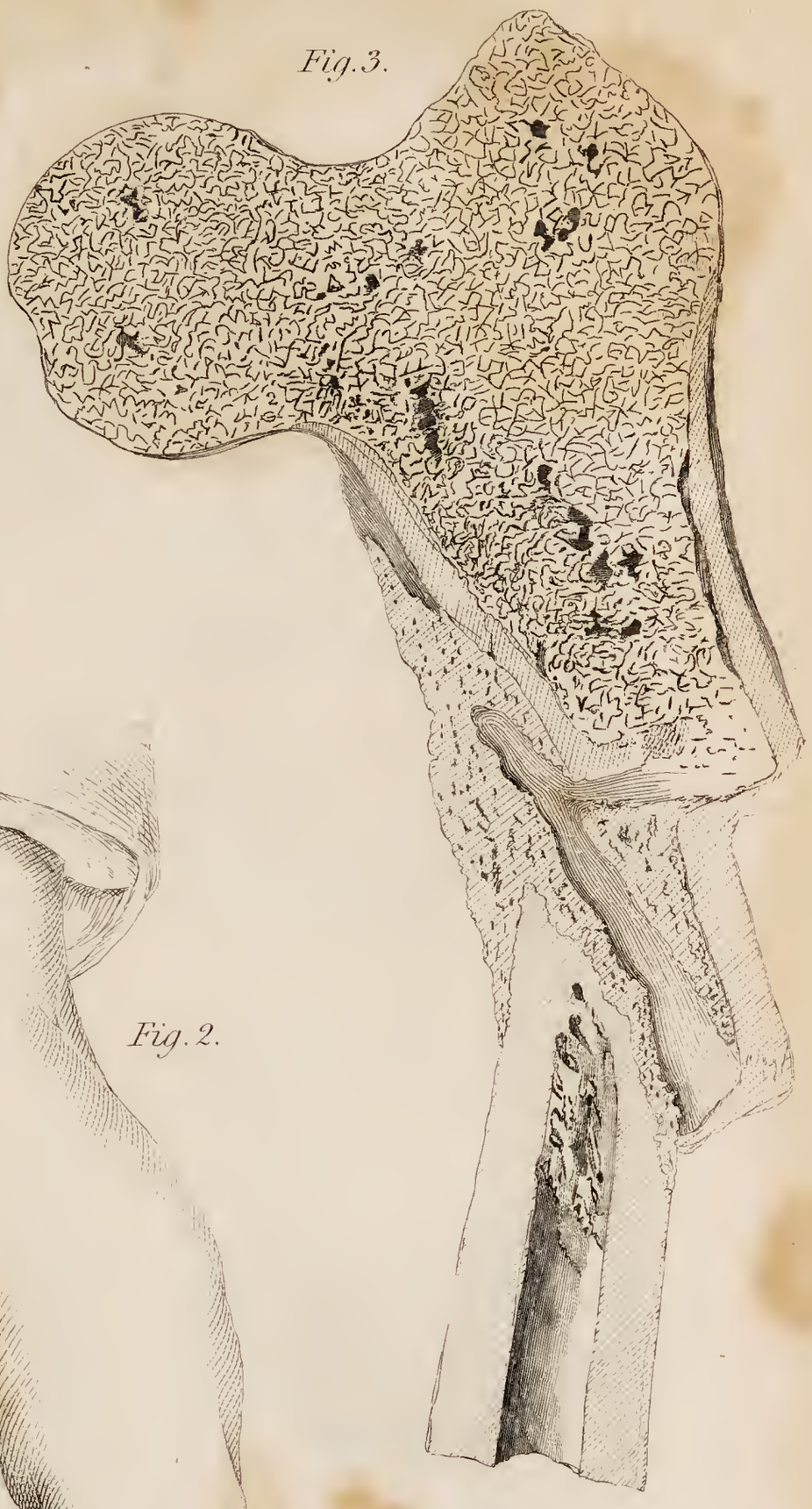

Fig. 2.

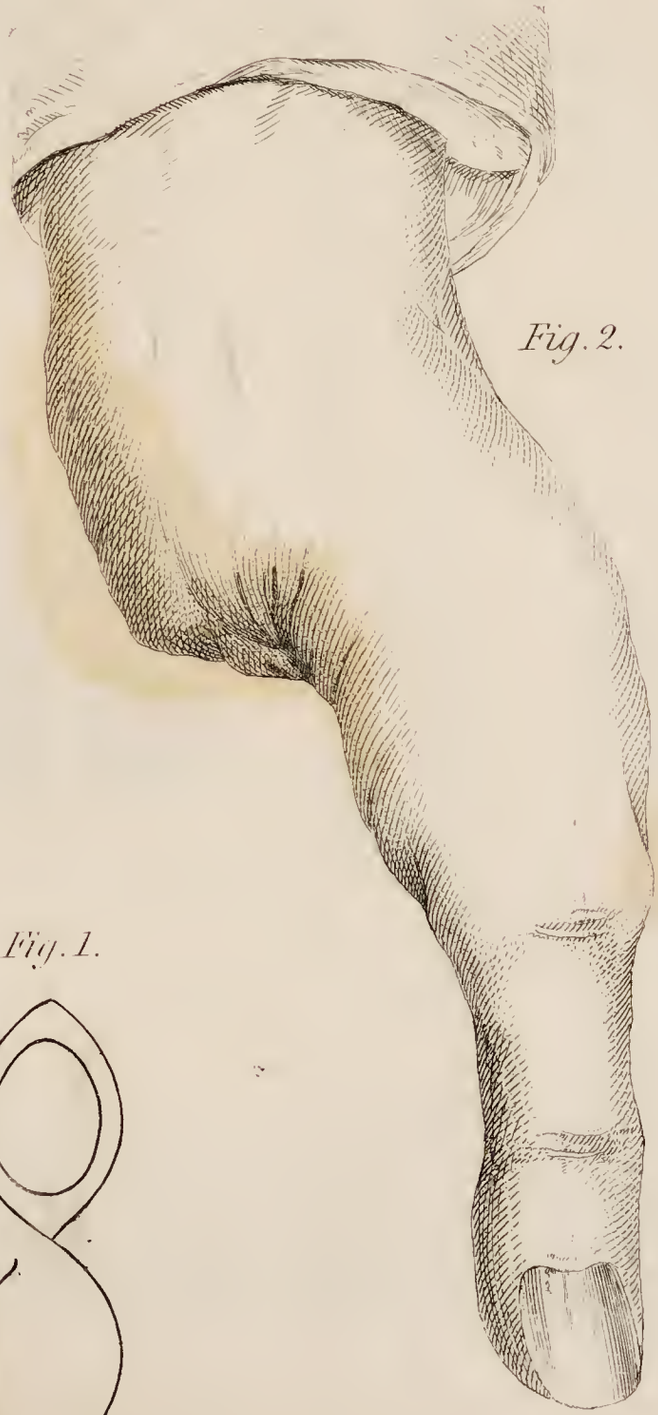

Fig. 1.

Fig. 5.